

THE REPTILES AND BATRACHIANS OF THE NATUNA ISLANDS.

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THE collections made by Mr. *A. Everett* and Mr. *Ernest Hose* during their visits to the Natuna Islands must be regarded as rich, considering the short time they were able to devote to their exploration. There is no doubt that future visitors will be able to add to the following lists of species, but it is not likely that such additions will modify the views which can be formed from these collections as regards the general character of the Reptilian Fauna of this group of islands. It is a mixture of species inhabiting the large islands and countries bordering upon the southern half of the China Sea, in the midst of which the Natuna group is situated. The future must show whether the two new forms of Frogs described at the end of this paper are peculiar to the Natunas, or whether they will be rediscovered in some other part of Borneo or the Malayan region.

TORTOISES.

1. *Cyclemys amboinensis* Daud. Great Natuna.
2. *Cyclemys dhor* Gray. Great Natuna.
3. *Geoemyda spinosa* Gray. Great Natuna.
4. *Trionyx subplanus* Geoffr. Great Natuna.
5. *Chelonia imbricata* L. Great Natuna.

These Chelonians have a rather wide range of distribution, and do not indicate a special relation of the Natuna Fauna to either that of the Malayau Peninsula or of Borneo.

LIZARDS.

1. *Tachydromus seolineatus* Daud. Great Natuna. Of the seven specimens four were collected in the lower parts of the island, and they possess only one inguinal pore on each side. The three others were obtained at an altitude of 1000 feet on Mount Ranai, and have two such pores.
2. *Lygosoma olivaceum* Gray. Sirhassen.
3. *Mabuia multifasciata* (Kuhl) Blgr. Common in Great Natuna.
4. *Draco maximus* Blgr. Pulu Laut and Great Natuna, Mount Ranai, 1000 feet altitude. Hitherto known from North Borneo.
5. *Draco melanopogon* Blgr. Great Natuna. Previously known from Malacca and Borneo.
6. *Draco fimbriatus* Kuhl. Great Natuna. One specimen from Mount Ranai, 500 feet altitude.
7. *Draco volans* L. Pulu Laut.
8. *Aphaniotis fusca* Ptrs. Great Natuna, Pulu Laut. Apparently extremely abundant in the group.

9. *Gonycephalus chameleontinus* Laur. Great Natuna. Hitherto known from Java and Sumatra.

10. *Gonycephalus herveyi* Blgr. Great Natuna (common on Mount Ranai), Pulu Laut. Hitherto known from Malacca only.

11. *Ispalura nigrolabris* Ptrs. Sirhassen. Hitherto known from Borneo only.

12. *Cadotes cristatellus* Kuhl. Great Natuna. Abundant throughout the island, to an altitude of 1000 feet.

13. *Gonatodes kendallii* Gray. Great Natuna. A Bornean species, but abundant on Mount Ranai, to an altitude of 1000 feet.

Of the two Lizards from Sirhassen one has a wide geographical range, the other is Bornean. Eleven species were collected in Great Natuna and Pulu Laut, five ranging into regions east- and westwards. Of the six others four are characteristic Bornean species, while the remaining two are peculiar to the Malayan, Javan, or Sumatran Faunas.

SNAKES.

1. *Calamaria flaviceps* Gthr. Great Natuna. A Bornean species.

2. *Dryocalamus tristriatus* Gthr. Great Natuna. A Bornean species.

3. *Ablabes buliodirus* Boie. Great Natuna.

4. *Tropidonotus conspicillatus* Gthr. Great Natuna. A Bornean species.

5. *Zoocys fuscus* Gthr. Great Natuna. A Bornean species.

6. *Gonyosoma oxycephalum* Boie. Great Natuna.

7. *Dendrophis picta* Gim. Great Natuna.

8. *Dendrophis caudolineata* Gray. Great Natuna.

9. *Paras lavis* Boie. Sirhassen.

10. *Chrysopelea ornata* var. D, Gthr. Great Natuna.

11. *Chrysopelea rubescens* Gray. Sirhassen.

12. *Dryiophis prasina* Ruwrdt. Great Natuna. Var. *fasciolata* Fisch. Great Natuna.

13. *Psammodynastes pulverulentus* Boie. Great Natuna.

14. *Python reticulatus* Schn. Great Natuna.

15. *Trimeresurus wagleri* Schleg. Great Natuna. Scales in twenty-five series.

16. *Trimeresurus maculatus* Gray. Sirhassen. A Bornean species.*

17. *Trimeresurus pumiceus* Wagl. Great Natuna, Pulu Laut.

Of the three Snakes from Sirhassen two are Bornean species, one having a wide distribution. Fourteen species were collected in Great Natuna, ten ranging into regions east- and westwards. The four others are characteristic Bornean species.

BATRACHIANS.

1. *Rana macrodon* Tschudi. Great Natuna. Widely distributed.

2. *Rana gracilis* Wieg. Great Natuna. Widely distributed.

3. ? *Rana haschiana* Stoliez. Great Natuna. A single specimen, not in good state. Previously described from Pinang.

* A considerable amount of circumstantial evidence has accumulated to show that many specimens presented by General Hardwicke to the British Museum, and said to be from Singapore, really came from Borneo.

4. *Hylorana erythraea* Schleg. Great Natuna. Very common. Also from Pulu Lant.
5. *Polypedates maculatus* Gray. Great Natuna.
6. *Polypedates colletti* Blgr. Great Natuna. Described from Sumatra and North Borneo.
7. *Polypedates macrotis* Blgr. Great Natuna, Mount Ranai.
8. *Lealus aurifasciatus* Schleg. Great Natuna. Widely spread in Java and Borneo.
9. *Pedostibes guentheri* Blgr. Sirhassen. A Bornean species.
10. *Bufo melanostictus* Schneid. Great Natuna.
11. *Bufo divergens* Ptrs. Great Natuna. A Bornean species.
12. *Bufo quadriporcatus* Blgr. Great Natuna. Described from the Malayan Peninsula.
13. *Calophrynus pleurostigma* Tsch. Pulu Lant.

14. ***Diplopelma bunguranum* sp. nov.**

Similar in habit to *Diplopelma ornatum*. Head rather small, with angular *canthus rostralis* and with the snout somewhat projecting beyond the mouth, and rather longer than the eye. Interorbital space broader than the upper eyelid. Mouth narrow; tongue large, subelliptical, not notched behind. Tympanum well formed, but covered by the skin. The third finger projects much beyond the three others, which are short, the fourth particularly so. Toes short, very slightly webbed, the third a little longer than the fifth, the first very short. No disks. Metatarsal tubercles very indistinct. If the hindlimb is carried forwards, the tibio-tarsal articulation does not reach the eye. Skin on the back minutely granular, nearly smooth; sides and lower parts of the body with larger tubercles.

Back dark purplish brown. A reddish rose-coloured band borders the upper outline of the snout in its entire circumference, and runs above the eye and tympanum to the side of the body, where it widens and merges into the red colour of the hind-legs; on the loins it encloses an oval black spot. The sides of the head and the throat are black, which colour extends over a greater or lesser portion of the abdomen, the remainder of the abdomen being of a yellowish rose-colour. Small pointed tubercles of an intense yellow are scattered on the sides and lower parts; sometimes two on the chest are particularly conspicuous and symmetrically placed. Hind-legs rose-coloured; thighs with round yellow spots; calves with one brownish band across the middle, sometimes with a second nearer to the knee-joint.

Length of body of a large *female*, 24 mm.

Distance of vent from tip of fourth toe, 37 mm.

Length of tarsus, 6.5 mm.

Distance of heel from tip of fourth toe, 8.5 mm.

To judge from the number of specimens in the collection, this lovely Frog must be very common in Bunguran, or Great Natuna.

15. ***Leptobrachium natunae* sp. nov.**

Tongue ovate, long, and much narrower than the cavity of the mouth. Snout rounded, about as long as the eye, with indistinct *canthus rostralis*; nostril nearly midway between the eye and end of the snout. Interorbital space broader than the

* This species will be figured in the next volume of NOVITATES ZOOLOGICÆ.

upper eyelid. Tympanum indistinct, not half the area of the eye. Fingers and toes of moderate length. The second finger very little longer than the first; the third longest. Toes not webbed. Tips of fingers and toes blunt; subarticular tubercles indistinct; one flat elongate inner metatarsal tubercle. The distance between vent and tibio-tarsal articulation equals, or may even exceed, the length of the body. Skin of the back with very small flat indistinct granulations; lower parts quite smooth.

Upper parts brownish olive, uniform or marbled with brown; upper lip black, with some white spots; a black band from the eye over the tympanum to the shoulder. Sides of the body with larger or smaller black spots. Hindlimbs with brownish cross-bars.

Length of body (adult *female*), 19 mm.

Length of hind-limb, 30 mm.

Distance of heel from tip of longest toe, 8 mm.

The exact and normal form of the pupil (said to be erect in this genus) cannot be ascertained. In one specimen it is distinctly horizontal; in another it is produced upwards into an angle.

The specimens are from Great Natuna.

I consider this species a dwarf (insular) form of *Leptobrachium gracile* (Gthr.) from North Borneo, which is a much larger and more strongly developed species; in fact, it will be very difficult to distinguish young specimens of the latter from *L. natunae*.

Only one species of Frog was collected in Sirihassen—viz. *Pedostibes guentheri*, a Bornean form. Two of the Natuna species seem to be new. Of the remaining twelve species one only is Bornean, and two belong to the Malayan Fauna, the remainder having a more or less wide geographical range.
